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CIRCULAR TEMPLUM AND MUNDUS.
WAS THE TEMPLUM ONLY RECTANGULAR?

The rectangular form is supposed to be essential to the Etruscan and Roman *templum*, to the exclusion of any other shape.¹ This is in fact a cardinal doctrine of Roman and Etruscan antiquities. Considering the importance of the *templum* in Roman religion and history: that it was the basis for augury and divination, for ascertaining the will of the gods and for keeping in touch with them; considering that it governed Roman topography and city life, and was important in law and in war, it is curious that the above mentioned conclusion has been reached and held on such slight grounds. I expect to show two things: (1) that the supposed evidence in favor of an exclusively rectangular form of *templum* and against a circular *templum* is valueless; and (2) that there is overwhelming evidence in favor of circular *templa*. On the face of it this would be a probable result, because the original *templum* is the sky with its circular horizon. Usually it is conceded that the heavenly *templum* was the entire expanse, and therefore circular, but some extremists like Nissen and Carter believe that even the heavenly *templum* was square, being a special section of the heavens marked out by the magistrate or augur for observation. For this there is no real evidence, as Bouché-Leclercq, (*Hist. de la div.* IV, p. 29) has noted. In fact while Bouché-Leclercq accepts without hesitation the square form of the terrestrial *templum* he has brought together a number of data in favor of an original circular form for the terrestrial as well as the celestial *templum*, data which he disregards on account of the supposedly conclusive nature of the evidence for the rectangle.

The evidence in favor of the exclusively rectangular scheme of the earthly *templum* consists of the following three passages in Gellius, Festus, and Servius.

¹ Fowler, *Religious Experience of the Roman People*, p. 302: Wissowa, *Relig. u. Kult. d. Römer*², p. 527.

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Archaeological Institute of America, Vol. XVIII (1914), No. 3.

- I. GELLIIUS, XIV, 7, 7: *non omnes aedes sacras templa esse et ne aedem quidem Vestae templum esse.*

Gellius says that the shrine, or, as we say, the Temple of Vesta, was not a real temple. Modern critics have inferred that as the temple of Vesta was *circular* it was excluded from the class of real temples *because* of its shape. But this is a gratuitous assumption, and not in the least warranted by the text. The form may be merely a coincidence. The real reason for the exclusion of the temple of Vesta may be due to the character of the cult of Vesta which differs fundamentally from all others in its affiliation with the house and family. Later in this paper a few data will be given which favor the theory that circular buildings may be erected within a *templum* area and are therefore themselves *templa*.

I wish also, in this connection, to point out the curious error underlying the identification that has thus been made between *building* and *templum*. It seems a case of persistent and contagious inadvertence. It surely ought not to be necessary to call attention to the fact that the *templum* was not a building but an area, a piece of consecrated land; that in the primitive times, when *templa* were first consecrated, the cult centred not in a building—for there were no buildings—but at an altar and often in a sacred grove or *lucus*, consecrated by a *lex*; that the definition of a *templum* as a high place from which every thing was visible showed that it was originally an open space; and that if the sacred area were of the correct form, the *aedes* built within its limits might presumably be of any form whatever; that in any event, the limitation or boundaries of the area could not be the same as those of the building, because a certain amount of consecrated aerial space was required by law outside of the structure. When, as here, the classic definition of the term has been so clearly and repeatedly stated, it is amazing that authorities such as Wissowa have failed to see that the idea of *templum* as an area persisted even to imperial times, as will appear later. It follows, then, that a circular building could be erected in the area of a rectangular *templum*, or *vice versa*. To conclude that the temple of Vesta, because its structure was circular, was built in a circular enclosure is a *non sequitur*.

This makes it the more possible that, if the *aedes Vestae* was not a *templum*, it was because of the unique character of her cult. This text therefore leaves the matter open, and to be decided

without prejudice from other sources, on the basis of Varro's definition that the *templum* was not a structure but a space marked out by augury and the taking of auspices with a certain very precise formula of words.

II. SERVIUS, *Aen.* II, 512: *Varro locum quattuor angulis conclusum aedem docet vocari debere.*

This passage is of small value for several reasons. Servius' lack of comprehension of the whole question is shown by his use of *aedes* in place of *templum*, for an *aedes* could hardly be a *locus*. Then, as we fortunately have Varro's own words defining what he believes a *templum* to be, and as he does not ascribe a rectangular form to any one of his three classes of *templa*, Servius can hardly be reporting Varro correctly. It is merely another instance of the common unreliability of Servius. What Varro actually says will be discussed later.

III. FESTUS, 157: *Minora templa fiunt ab auguribus, cum loca aliqua tabulis aut linteis saepiuntur, ne uno amplius ostio pateant, certis verbis definita. Itaque templum est locus ita effatus aut ita saeptus ut ea una parte pateat angulusque adfixus habeat ad terram.*

This passage describes not the major but the minor *templum*, the augural *templum* from which the auspices were taken, with a single opening and enclosed for the occasion by boards or curtains. The last part of this passage, which bears on the question of the form of the *templum*, is apparently corrupt, and the words *angulusque adfixus habeat* are amended by Valeton and Müller¹ into *angulosque IIII adfixos habeat*. The "four corners" therefore, upon which the argument for the rectangular form mainly rests, is nothing but a textual emendation, and therefore valueless as evidence. It will be proved, later, that there were minor *templa* of this class that were clearly triangular and not rectangular, so that we should be better warranted in emending the text to read "three corners" than "four corners."²

These three passages, then, which have been supposed to prove conclusively the rectangular outline of the *templum* seem to fur-

¹ Valeton in *Mnemosyne*, XX, p. 369, and Müller *ad loc.* in his ed. of Festus.

² It will be noticed that the second clause, beginning *Itaque templum*, is a restatement in slightly different terms of the first clause, so that the words *ea una parte pateat* with what follows would seem to correspond, in an amplified form, to the expression in the first clause *ne uno amplius ostio pateant* and to refer to the door-posts.

nish no proof whatsoever. With an unbiased mind we may therefore ask: Are there any indications whatsoever that the Etruscans and Romans associated any particular form with the *templum*?

Festus,¹ than whom there is no better source, hardly appears to associate any special outline with the *templum*, since he defines it merely as an elevated place visible from everywhere or from which everything is visible: a definition based upon an etymological connection with *contemplari*. This passage applies, of course, only to the earthly *templum*, and is important because it refers to that form of the *templum* for which man would feel the most free to select a form independently of nature's limitations.

Varro, however, is more specific on this point, and the two Varronian passages descriptive of the *templum* are the inevitable starting-point. Although they are so well known, there is more in the way of evidence in them than seems to have been noticed, and, in particular, the form of his earthly *templum* seems to me to have been misconceived, and that of the heavenly *templum* not always correctly stated.

There are three classes of *templa*, according to Varro: the celestial, the terrestrial, and the sub-terrestrial. The form of the celestial is circular in plan from the shape of the hemisphere of heaven; the sub-terrestrial is also circular from analogy, while the form of the terrestrial is defined by the science of auspices.²

The celestial *templum* is the entire hemisphere, not a part of it; being bounded by nature's horizon, not by any augural ceremony. This is insisted upon because it has been recently stated that the heavenly *templum* was a certain limited space in the heavens, and even that it was a rectangular space. When this entire domain of Jupiter was interrogated by the augur for signs of the divine will it was divided by the augur's wand into four sections by two intersecting lines from South to North and from East

¹ P. 38. *Contemplari dictum est a templo, id est loco qui ab omni parte aspicitur, vel ex quo omnis pars videri potest, quem antiqui templum nominabant.*

² LL. VII, 6-13. *Templum tribus modis dicitur: ab natura, ab auspicando, a similitudine; ab natura in caelo, ab auspiciis in terra, a similitudine sub terra. . . . Quaque tuiti erant oculi, a tuendo primo templum dictum; quocirca caelum qua tuimur dictum templum; sic: "Contremuit templum magnum Iovis altitonantis," id est, ut ait Naevius: "Hemisphaerium ubi concha caerulea saeptumst." Eius templi partes quattuor dicuntur, sinistra ab oriente, dextra ab occasu, antica ad meridiem, postica ad septentrionem.*

to West. This seems to have always remained the scheme for divination by birds. In the Etruscan system for divination by thunder and lightning, the *templum* was further subdivided, into sixteen sections, radiating from centre to circumference, four in each of the four major divisions first mentioned.

Texts might be multiplied (they may be read in Nissen's *Templum* and his recent *Orientation*) which place beyond a doubt that the celestial *templum* had a circular circumference—that given to it, as Varro says, *a natura*. So it would be futile to waste any effort in proving it. The four sections into which it was divided were bounded by the line of the *hemisphaerium*, as Naevius expressed it, and the whole was the *templum* of Jupiter, *templum magnum Iovis altitonantis*.

I have no intention of discussing here the general question of the *templum*; and shall confine myself to giving material that bears on the question whether it was allowable or not to give it a circular form, and on the relation between *templum* building and area.

Passing therefore from the form of the celestial to that of the terrestrial *templum*, Varro, in the same text that has been quoted above, speaks of it as a place with boundaries established by means of certain verbal formulas as a seat for augural ceremonies and auspices.¹ The formulas of consecration varied according to the case. Varro gives the formula used in the annual reconsecration that took place in Rome on the Capitol, *in arce*. Here the *templum* is extensive and bounded by certain ancient trees both on the left and on the right. Evidently the ancient formula that was conceived at a time when the hills of Rome were wooded was still repeated, with its verbal archaisms.²

This formula is quite evidently not suited to a building! The wide area which it includes extends far in front of the magistrate or augur, as he is obliged to define its border line by his mind and memory (*cortumione*) as well as by his eyesight (*conspicione*). I shall not discuss the shape of this area as it is here described,

¹ *Ibid.* In terris dictum templum locus augurii aut auspicii causa quibusdam conceptis verbis finitus. Concipitur verbis non hisdem usque quaque.

² *Ibid.* "Templa tescaque me ita sunt quoad ego caste lingua nuncupavero. Olla veter arbos, quirquir est, quam me sentio dixisse, templum tescumque finito in sinistrum. Olla veter arbos, quirquir est, quam me sentio dixisse, templum tescumque finito in dextrum. Interea conregione conspiciene cortumione utique ea rectissime sensi."

because my object in quoting the passage is merely to show that the term *templum* is used of a wide area and not of a building. But elsewhere I expect to show that the shape is not, as has been supposed, a square, but a triangle.

Besides the passage from Festus quoted above, which also defines the earthly *templum* as an area, there are others more or less in the same sense. Cicero says (*Legg.* II, 21): *urbemque et agros templa liberata et effata habento*. Varro again (VI, 53) drives in his definition when he says: *effari templa dicuntur ab auguribus; effantur qui in his fines sunt*. Both Servius¹ and Isidore² speak of a *templum* as a *locus* and not as a building.

It was, of course, natural that as the building or *aedes* on a *templum* area became, in the course of architectural evolution, of paramount importance, the term *templum* should have gradually, in popular language, been transferred from area to building. Only in technical language and ceremonial would the earlier custom have finally survived. In the first three or four centuries of Rome, the altar or *ara* was the centre of worship in the *templum* area, in Rome as in all the Latin, Hernican, Volscian, Sabine, and Umbrian cities; and only through Etruscan and Greek influence did the *aedes* overshadow the *ara* and finally absorb the *templum*.

Still, even at a late period there are proofs besides the passages just quoted that in religious ceremonial the *templum* and the sacred structure upon it were not synonymous.

The original difference is still recognized as late as the time of the inscription in *C. I. L.* VI, 30985, which Wissowa quotes (*R. K.*², p. 472, n.); *aedem ipsius [Silvani] marmoratum a solo sua pecunia fecit et templum marmoris stravit idemq(ue) dedic(avit)*. Here the *stravit* refers to the entire sacred area or *templum*, which is enclosed by the consecrated limits or boundary, and it is this area and not the *aedes* or building, which is referred to as being dedicated. The area being dedicated, the *aedes* is consequently included in the dedication.

The same distinction is made by Festus in regard to the shrine of Ops. He states (p. 189) that it is an *aedes* but not a *templum*; that is, it does not stand on a consecrated area or *templum*: *huius*

¹ Servius, *Aen.* III, 403: *ita templa faciebant, ut . . . per augures locus liberaretur effareturque*.

² Isidore, XV, 4, 7: *locus designatus ad orientem a contemplatione templum dicebatur*.

[i. e. Opis] *aedis lex nulla extat neque templum habeat necne scitur*. The formula by which an area was dedicated or consecrated as a *templum* was called a *lex*: the special *lex* of this area.

This distinction is shown also in another way, by the fact that a single *templum* area might contain more than a single temple or *aedes*. Not to go beyond texts that Wissowa himself quotes, the *templum Divorum* of the Flavian emperors in the Campus Martius contained the *aedes divi Titi* (*C. I. L.* VI, 10234, 8, 10, 23) as well as the *aedes divi Vespasiani*, one on each side of the central open court surrounded by the colonnade which bordered the area of the *templum*. I shall quote, later, the case of the two temples at Tivoli built within a single *templum*.

Notwithstanding such texts as this, Wissowa believes that the only distinction between *aedes* and *templum* is that *aedes* means the cella of the temple and *templum* the entire structure. He quotes Delbrück's suggestion (*Die drei Tempel*, p. 37) that originally *aedes* was the superstructure and *templum* the basement of the temple. Of course when the temple building was given but a small space in a crowded quarter, the *templum* did not extend much beyond the structure itself, but in perhaps the majority of cases the *templum* was fairly extensive and was bounded by colonnades and walls with a free-standing temple at the end. Another bit of evidence that the Romans never associated the word in the way we do with a temple is that the Rostra were a *templum* (Cicero, *in Vat.* 19, 24; Livy, VIII, 14); and that the open spaces where the *comitia* met were *templa*.

Circular Temple at Tivoli.—As bearing on the question of the consecration of circular buildings, it is important to study the temples on the acropolis of Tibur (Tivoli). Here two temples stand side by side; one is rectangular and the other is circular in plan. To what divinities they are dedicated is unknown. They are evidently early, and evidently built in the same style and at the same time, which is usually supposed to be the age of Sulla. They belong therefore to the rare and beautiful class of Hellenistic monuments of Latium. Now, if we examine the area on which these temples stand, there is no sign whatever that they stood on *separate* sacred areas. Ritual requirements would have made necessary a ditch or a double parapet or wall or some sign of division between the two edifices, if each had been consecrated separately. Instead of this, the two buildings are so close that hardly three metres separate them and the ancient floor

level of the area shows without a break between them. Consequently, as in the case of the Flavian *templum divorum* in Rome, we have here a single *templum* on which stood two *aedes*, one circular and the other rectangular. Now, as in a *templum* it was the area that was primarily the thing dedicated and not the buildings; and as the dedication of the *templum* involved the dedication of *all the buildings* erected within its limits, it follows that if the circular temple could not be a *templum* on account of its form, neither could the rectangular temple be a *templum*. The consequence of this would be that what were apparently the principal temples of ancient Tibur were lacking in the essential of sacredness, which is most improbable. This brings me back to the proposition that the temple of Vesta could not be a *templum*, not because of its circular form, but because of the character of the cult of Vesta. There is no proof whatever that the circular temple at Tivoli was dedicated to Vesta, and there is every probability that it was a real *templum*, because it was presumably on a *templum* area.

There are other cases in which a circular temple is not merely one of the main temples, but the one central shrine to which the privileges of a *templum* could hardly be denied. Such, for instance, in the early shrine of Monte Musino,¹ between Rome and Soracte, not far beyond Veii. It crowns the top of a volcanic hill, cut into a rough three-stepped basement for the primitive altar (*Arae Mutiae*) surrounded by a sacred grove; in historic times a circular temple supplemented the *ara*; the god is unknown.

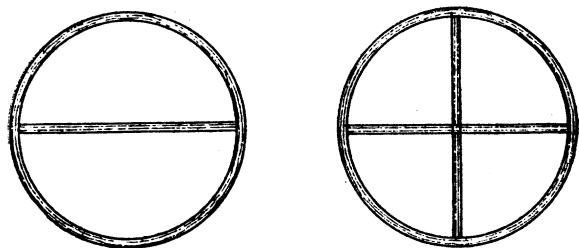
The Circular Tent a Templum.—Bouché-Leclercq says, quite correctly (IV, p. 197, n.) “Dans les camps qui sont, eux aussi, de grands temples, la tente du général était le petit temple et s'appelait, pour cette raison, *augurale*” (TAC. *Ann.* XV, 30. QUINTIL. VIII, 2, 8). This fac-simile of the original *templum minus* or *tabernaculum augurale* on the Capitol in Rome itself, was circular. Lest it be argued that such tents were not circular, I will cite two monumental proofs, both of the circular form of the tent and of its augural significance. The first is the palace of Diocletian at Spalato; the second is the forum of Constantine at Constantinople. The plan of Diocletian's palace, as everybody knows, is a splendid reproduction of the arrangement and plan of a great Roman camp. Beyond the intersection of *cardo*

¹ Abbate, *Guida delle Provincia di Roma*, p. 45.

and decumanus, at the central point of the head-quarters, where the general's tent would have stood, is its permanent substitute in stone, a circular room surmounted by a dome, directly in front of the imperial throne-room. The plan of the palace can be consulted in many reproductions, including my own *Roman Cities in Italy and Dalmatia*, p. 304.

As for the original forum of Constantine's city of Constantinople, before its enlargement under the Theodosian dynasty, it had the extraordinary form of a large circle or rather oval place surrounded by porticoes and with a triumphal arch at each of the ends. In the anonymous mediaeval Byzantine description of Constantinople (I, p. 14) and in Codinus (p. 41) the circular shape is explained as derived from the form of Constantine's tent when he was besieging Byzantium.¹ Of course the real analogy in this case would be with the *Mundus* and *Comitium* of Rome.

The Templum in the Drawings for the Roman Gromatici.—The drawings which illustrate the Roman surveyors—the *gromatici* or *agrimensores*—Frontinus, Hyginus, Dolabella and the rest, can



FIGURES 1-2—FROM FRONTINUS
(Lachmann, Figs. 27 and 29)

be studied in the cuts of Lachmann's edition. The editor rightly judges these illustrations to be mediaeval copies of originals of Roman date and to represent current and traditional Roman usage. Many of these figures are meant to elucidate the orientation of the land survey, the direction of the *cardo* and *decumanus* lines and their relation to topographical terminology. These figures are bounded by *templum* outlines and are based on the cross formed by the intersection of *cardo* and *decumanus*, within the *templum*. Now if the *templum* were rectangular, we should

¹ See VAN MILLINGEN, *Byzantine Constantinople*, p. 11.

find the terminating lines enclosing the *cardo* and *decumanus* cross in the form of a square or rectangle. On the contrary, what we find is a circle, with the *decussis* or intersection of cross-lines in the centre. This shows that the figure which the Roman mind associated with the general earthly *templum* was the circle, making it the counterpart of the heavenly *templum*. This imitation or analogy finds support in the expressions of the text. As examples of the above figures, I reproduce some from the texts of Dolabella, Hyginus, and Frontinus (Figs. 1, 2, 3). I shall quote a well-known passage from Frontinus (p. 27) which these figures serve to illustrate, to make it plain also that he has in mind the general earthly *templum*:—*Limitum prima origo, sicut Varro*

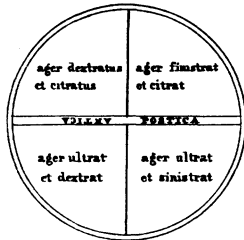


FIGURE 3.—FROM DOLABELLA
(Lachmann, Fig. 229)

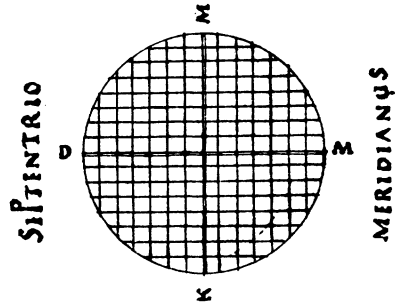


FIGURE 4.—FROM HYGINUS
(Lachmann, Fig. 136)

descripsit, a disciplina Etrusca; quod aruspices orbem terrarum in duas partes dividerunt . . . aruspices altera linea ad septentrionem a meridiano dividerunt terram, et a media ultra antica, citra postica nominaverunt. Ab hoc fundamento maiores nostri in agrorum mensura videntur constituisse rationem. Primo duo limites duxerunt; unum ab oriente in occasum quem vocaverunt decumanum alteram a meridiano ad septentrionem, quam vocaverunt cardinem. Decimanus autem dividebat agrum dextra et sinistra, cardo citra et ultra. The last figure (Fig. 4) illustrates the distribution of a colonial territory into individual holdings.

The historical character of these drawings was thoroughly granted by Schulten in *Hermes*, XXXIII, 1898, pp. 534 ff., and Pais called attention to their circular outline and its significance in *Ancient Legends*, p. 228.

Inscribed Roman Circular Templum.—I have noted an important confirmation of the antiquity of these illustrations. It

is in *C. I. L.* VI⁴, 30593. Cut on a slab from a Roman columbarium, now at Urbino, is a circular figure, as in Figure 5.

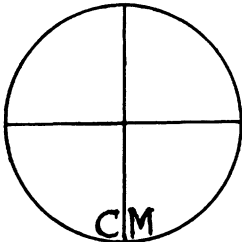


FIGURE 5.—FROM COLUMBARIUM SLAB AT URBINO
(*C. I. L.* VI⁴, 30593)

Here is the earthly *templum* bisected by the cardo and decumanus; and, that there may be no doubt of the fact, we have the letters C M for *cardo maximus* in the correct place at the bottom, the southern or lower end of the earth. I do not know whether the real character and bearing of this figure and its letters has ever been noted. It puts beyond question the authenticity of the illustrations; the use of C M proves that it is not the heavenly but the earthly *templum* that is represented.

Circular Templum on Boundary Stones.—The same circular figure enclosing the cardo and decumanus lines is cut on boundary stones of the time of the Gracchi, according to Pais, *Anc. Legends*, p. 228 (see *C. I. L.* I, 552–556). Possibly the columbarium slab just described was originally just such a boundary stone.

Of course such circular earthly *templa* imply circular pomerial strips and ditches, as will appear later.

The Templum of Olenus Calenus.—These drawings can be supplemented by the form of the *templum* drawn by the mythical Olenus Calenus, according to Dionysius of Halicarnassus. Among famous early Roman legends is that of the finding of the human skull on the Capitoline hill in digging the foundations of the temple of Jupiter under the Tarquins. Deputies were sent to Olenus Calenus, the most celebrated diviner of Etruria, to enquire of him the meaning of this portent. He, knowing that to this portent was attached the sovereignty of the world, and wishing by a trick to transfer its virtue to Etruria and to its people, traced on the ground in front of him the outline of a *templum* and, pointing to a certain part of it as corresponding to that part of the hill on which the temple was to be, asked if it was not here that the skull was found. But the Roman deputies, forewarned of the trick, answered, “no, not here but in Rome was the head found.” Of the full accounts of this legend, that of Pliny (XXVIII, 15) and that of Dionysius (IV, 69–71), the latter is much the more detailed and particularly so in the part most important to this enquiry, that is to say, in regard to the form of the *templum* which Olenus Calenus traced on the ground. The diviner’s son warns the Roman deputies that his father, after tracing a circle will say

to them: "This represents the Tarpeian hill; here is its eastern and there its western part; here its northern and there its southern side," and then, still pointing with his stick, will ask them in which of these sections the head was found. At the interview that followed, there is a fuller description of the way in which Olenus Calenus actually drew the *templum*. He first described a circle and then bisected it by transverse lines which divided it into the four usual regions: διαγράφοντος ἐπὶ τῆς γῆς περιφερεῖς τε γραμμὰς καὶ ἑτέρας αὐθις εὐθείας.

In the traditional sources from which Dionysius derived this legend, and which belonged probably to the second or third century B.C., the outline of the earthly *templum* was therefore circular, exactly as later in the illustrations of the *agrimensores*.

Fulgural Templum and Liver-Templum.—The Etruscan scheme of fulgural divination is based on a *templum* of the heavens divided into sixteen sections, each of which is connected with a system of divine and infernal deities and spirits, which we find elaborated by Martianus Capella. This has already been alluded to as presupposing the circular form of the *templum*, and I believe that this conclusion has never been disputed.¹

There seems to be a close connection between this system and that of divination by the liver, also a branch of the Etruscan science, as it is illustrated in the famous bronze model of a divination liver found at Piacenza. It is a well-known fact that the liver was considered by the Babylonians and by their pupils in liver-divination, the Etruscans, to be the seat of life and that the liver of the victim was made a counterpart of the soul (or liver) of the god. The sacrificial liver was, then, a reflection of the celestial *templum*. It is natural then, that we should find that the left lobe, the main part or *pars familiaris*, was divided along its border into sixteen compartments, on the same basis as the circular fulgural *templum*. The dividing lines, in fact, are drawn as if from centre to circumference. In so far, then, as was possible in an irregular natural organ, such as the liver, its divisions for divinatory purposes were based on a circular and not a rectangular outline.²

¹ Nissen, *Das Templum*; Martianus Capella, I, 15 (p. 17 Ed. Eyssenhardt); Thulin, *Die Götter des Martianus Capella u. der Bronzeleber von Piacenza*; and his *Die etruskische Disciplin*.

² Körte, *Die Bronzeleber von Piacenza* (*Röm. Mitt.* 1905, pp. 348 ff.); Deecke, *Etrusk. Forsch.* IV (1880) and *Etrusk. Forsch. u. Stud.* II (1882); Blecher, *De Extispicio*.

The Bidental.—The peculiar monument called *bidental* has a decided place in the question of a circular *templum*. The *bidental* was the consecrated burial-place of the thunderbolt of Jove on the spot where the bolt was supposed to have buried itself in the ground. It is generally granted that the idea was of Etruscan origin and this seems probable, considering the dominance of the Etruscans in divination by thunder and lightning. Still the *bidentalia* were governed by Roman ritual and are said to have been consecrated not only by Etruscan haruspices but by Roman augurs. Furthermore there was the closest connection between the *bidentalia* and the primitive non-Etruscan Roman god Dius Fidius. There were in Rome *sacerdotes bidentales* and *decuriae bidentales*. The details and references can be found *s. v.* in Pauly-Wissowa.

The important matter for this thesis is: first, that the *bidental* was a *templum*, and, second, that its form was circular. In the epitome of Festus (p. 33) we find: *Bidental dicebant quoddam templum, quod in eo bidentibus hostiis sacrificaretur. Bidentes autem sunt oves duos dentes longiores ceteris habentes.* Of the two *bidentalia* in Rome, about which we know something, the *puteal Navianum* in the Comitium and the *puteal Scribonianum* in the Forum (Festus, 333), we have a reproduction of the latter on some coins of the gens Aemilia and the gens Scribonia (Babelon-Cohen) which show it in the form of an altar within a circular enclosure. The circular character, attested also by the term (*puteal*), is acknowledged by Fowler,¹ Bouché-Leclercq² and others, and the connection of the augurs and haruspices with the consecration ceremony supports the statement of Festus that these *bidentalia* formed a special class of *templa*. The special Roman term for a *bidental* appears to have been *puteal*, and also in C. O. Thulin, *Die etruskische Disciplin*, I, pp. 92 ff.

*The Mundus.*³—It seems impossible to avoid discussing the mysterious *mundus* in this connection, because it approaches dangerously near to being a representation of the subterranean *templum* and the place of worship of the chthonic gods, unless

¹ *Roman Festivals*, p. 140.

² *Histoire de la Divination*, IV, p. 52.

³ C. Thulin, *Etrusk. Disciplin* III, pp. 17 ff.; *s. v.* in Daremberg and Saglio and in Wissowa, *Relig. u. Kultus d. Römer*. Macrobius, *Sat.* I, 16; Nettleship, *Contrib. to Latin Lexicog.* p. 529; Fowler, *Mundus patet* (*Jour. of Roman Studies* II, 1); Servius, *Aen.* III, 134; Plutarch, *Romulus*, II; Ovid, *Fasti*, IV, 821; Festus, 154-7, and 258.

we consider it merely as the circular centre of the *templum* of the urbs. The *mundus* was the symbolic centre of the primitive city on the Palatine, into which the first fruits were cast. It was a subterranean structure that was opened only three times during the year, August 24, October 5, and November 8. It was supposed to connect with the underworld so that on these days the *di manes* had free egress into the city, and to avoid their dangerous influence no business was transacted unless particularly urgent. On account of the association of the *mundus* with *Roma quadrata* (Festus 258), it has been common to consider the *mundus* as square. An examination of the passage in Festus hardly proves more than that the stone which closes the entrance is square, and need not in the least refer to the form either of the subterranean chamber or of its *temenos* enclosure.

On the other hand, there is the explicit testimony of Cato, quoted by Festus (154) that the *mundus* itself was circular, on the model of the heavenly hemisphere and that this was, in fact, the origin of the name: "*mundo nomen impositum est ab eo mundo qui supra nos est; forma enim eius est, ut ex his qui intravere cognoscere potui, adsimilis illi.*" We are reminded, by this text, of Varro's statement that the form of the subterranean *templum* was the same as that of the heavenly *templum*, that is, circular. The lower part of the *mundus* is the domain of Dis and Proserpina, as was the subterranean or infernal *templum*.

A third passage describing the *mundus* is in Plutarch's *Romulus* and is very explicit on two points: the casting in of the first fruits and the circular form. But, what he describes is quite different. He places this *mundus* not on the Palatine but in the Comitium of the Forum. He also makes it to be not a subterranean well-shaped chamber that could be closed by a stone, but a narrow ditch like a pomerial trench surrounding the Comitium in the form of a circle (βέθρος . . . περί τὸ νῦν Κομίτιον κυκλοτερής), into which the founders of the new city cast the first fruits and also clods of dirt brought from the different places in which they were born.

Is it not possible, by combining the different elements of these accounts to reconstruct a plausible *ensemble*? (1) A ditch of circular outline, bounding the *templum* of the *mundus*; (2) the well-like structure of the *mundus* itself in the centre; (3) the square stone that closed the opening and was removed only on the three days in question.

Another question has been raised by Plutarch's placing the *mundus* in the Comitium. It is usually considered to be merely a blunder on his part, and but little importance has been attached to it. But it seems worth while to consider the matter from another aspect: that of the transfer to the Comitium of so many of the *sacra* and traditions of the Palatine, after the unification of the city and the elimination of the Palatine as a centre of authority in favor of the Forum and the Capitolium. After this had taken place the *mundus* of the Palatine could have nothing but a traditional, an archaeological interest. It seems probable that there had been a corresponding *mundus* on the Quirinal when that settlement was founded, independently of the Palatine, and that this also lapsed into desuetude. The idea of a repository for first fruits and perhaps for seed corn, gathered each year on behalf of the whole city, the *penus* of the *urbs*, was doubtless a common one. When the city of the Four Regions was established and the new classification of the population was made that is associated in one tradition with the famous augur Attus Navius, it is reasonable to suppose that the founding of the new and larger *urbs* of Rome with its single and extended pomerium, centring in or near the Comitium, would be celebrated by a new *mundus* in the centre of the new *urbs*. It is curious that it is precisely with Attus Navius that tradition connects the transfer from the Palatine to the Comitium of the Ficus Ruminalis of Romulus and Remus, and also with him the establishment of the *puteal* or circular sacred enclosure in the Comitium. It seems probable that when Plutarch wrote, the old *mundus* of the Palatine had long ceased to be used, and may even have been forgotten; and that in speaking of the *mundus* as in the Comitium he was not making any blunder. In fact this would account for a radical difference between what he describes and what Cato refers to. It is no longer a mysterious subterranean chamber, but an open ditch in which the offerings are cast. Evidently in the low ground of the Comitium it would have been impossible to excavate to any depth for a repository of offerings. The connection of the so-called Tomb of Romulus in the Comitium with the *mundus* has been proposed by Milani and Studniczka.¹ Finally, it is with the greatest diffidence that I suggest that some con-

¹ Milani in *Rendiconti Acad. Lincei*, IX, 1900, pp. 289 ff., and X, 1901, pp. 127 ff.; Studniczka in *Jb. Oest. Arch. In.* IV, 1903, pp. 12-186 and VII, 1904, pp. 239-244 (*Nachtrag*). Cf. Thulin, *Etr. Disc.* III, 23 ff.

firmation of the existence of such a *mundus* in the Comitium and of its circular ditch can even now be traced, and that in the coming season I hope to make a more careful study of these traces.

The results of this survey would seem to show that there are no sure proofs of any *taboo* attached to the circle as a form of *templum*, nor any proof that the quadrangular form was particularly associated with the *templum*, much less that it was its sole form. On the contrary there is abundant evidence that all three forms of *templa*—celestial, terrestrial and infernal—were circular.

While both celestial and sub-terrestrial temples seem to be always circular I am not asserting that no form but the circle can be ascribed to the terrestrial *templum*. On the contrary, in another paper I shall discuss the large class of triangular earthly *templa*; and I grant the existence of square *templa*.

A. L. FROTHINGHAM.

NORFOLK, CONN., July, 1913.

P. S.—This paper had been written some five months, when the news came, last week, of the discovery by Commendatore Boni on the Palatine, of a vaulted *tholos* of primitive tufa masonry which he identifies with the *mundus* of the Palatine. From the accounts I have read in the *London Times*, his identification seems to have the strongest arguments in its favor. Its circular vaulted form is exactly what—as this paper shows—it seemed to me probable that the *mundus* must have had. The square stone which he found there, however, might more readily be meant, in harmony with Cato's text, to close the bottom and not the top of the chamber. If, as I surely believe, Commendatore Boni's identification is accepted, he will be applauded throughout the learned world even more vigorously than heretofore.

The shaft full of Augustan fragments that was found near the discovered *tholos* is thought to indicate an abortive attempt to discover the lost *mundus* in the course, presumably, of the efforts of Augustus to revive the earliest traditions of Rome. If so, this would confirm the suggestion of a *mundus* in the Comitium which had caused the earlier *mundus* to be disused and forgotten. In view of this confirmation of the sacredness of the circle in what may perhaps be called the non-Etruscan traditions I am adding a few notes.

Circular City Boundary or Pomerium. Circular House and Circular Mundus.—It is the opinion of Bouché-Leclercq¹ and other critics that the original outline of the Italic City was not the square of the *terremare* town or the Roman camp, but that it was circular, and that the square form was a later development and from another source. In fact the change is thought to have taken place very much in the same way as the change from the primitive circular hut of the Latins and other Italic tribes to the rectangular house of the Etruscans—a change that can be traced to the seventh century B. C.

To the circular house, reproduced in the so-called cabin urns of the ninth and eighth centuries B. C. corresponded the circular pomerium around the city. The whole city was a *templum*. Rome was the *templum totius mundi*. Each city consecrated according to Roman, Etruscan or Italic ritual was a *templum*. The city of the dead was a chthonic *templum*. Every special group of tombs had a circular periphery in many of the early necropoles of Etruria. These circular sepulchral enclosures have been found in abundance at Tarquinii, Caere, Vetulonia, etc. They vary in form from a circular ditch or low circular wall of considerable extent enclosing a large number of burials, to smaller circular units set in rows and probably themselves originally enclosed in a general circle. The smaller family circle-tombs correspond to the circular city houses and the general enclosure to the pomerial city boundary.

Proofs are beginning to accumulate of the use of the circular pomerium. We need no longer depend on the meaning of *orbis* and *urvus* as a curved ditch. Thulin believes that in towns of the Villanova type the circular pomerium was the rule. The circuit at Monterado, between Montefiascone and Orvieto, is considered typical for the region of the lakes of Bolsena and Bracciano; Vulci, also, approaches the circular form on a large scale, with its five mile circuit. It must be borne in mind that

¹ *Hist. de la Divin. Ant.* IV, p. 29, calls attention to the fact that not only were temples of Vesta, Diana and Hercules or Mercury circular, but also the shrines of the Penates and of the Lares (Dion. IV, 14), which are primitive and connected with the city cult; also the temple of Dea Dia and possibly of Jupiter Feretrius on the Capitol. There is also a reference to Varro by Servius, *Aen.* I, 505, which favors the theory that originally a *templum* area always had a circular enclosure either uncovered or vaulted. This may be quoted in favor of my theory as to the circular uncovered enclosure at Signia.

the walls of a city with circular or oval pomerium need not have a wall circuit of the same shape. The outer border of the wide pomerial strip would alone require this outline. The walls, provided they were kept within the limits of the consecrated strip, could follow all the irregularities of the ground for purposes of defense and proper level. As the width of the pomerial strip is known in certain cases to have been from a thousand to twelve hundred feet, there was plenty of room for irregularities of wall outline. It seems quite probable that among Italic cities not founded by tribes related to the "Terramaricoli" and Etruscans an increasing number will be found with concentric plan based on circular pomeria.

This brings us back to Plutarch's statement that the plan of Rome—of the Rome of and after Servius—was *circular*, and traced around a circular centre, the Comitium: *εἶτα ὥσπερ κύκλον κέντρον περιέγραψαν τὴν πόλιν* (*Rom.* II).

It has been suggested that there are subterranean vaulted chambers on Italic city sites that correspond to the Roman *mundus*. Thulin (III, 18) cites the "Poggiarello" site near Bolsena. The suggestion appears to me perfectly logical and I would add a few instances. In surveying Norba, Sig. Cirilli, the architect, and I discovered and lowered ourselves into a circular domical chamber built below the area of the two temples on the southern hill. We called it for convenience a "cistern" but there was no trace of water and I judged it to be a depository of temple refuse. It was deep and narrow, covered by the usual false dome with overhanging courses; it might possibly be found to connect through its bottom with a large cave which I was able only partially to explore. To the theory that this was the *mundus* of Norba it may be objected that the main acropolis hill of the city was that near the north end, and that the *mundus* would logically have been on this northern hill. On the other hand, my theory as to Norba's evolution is that the pre-Roman city was centred on the northern hill; but that the Roman colony established at Norba in 492 B. C. centred on the southern hill, and that this was its *mundus*.

At Signia the treatment of the *mundus* was different. The "cistern" back of the Capitolium on the acropolis is an immense unroofed circular walled structure nearly a hundred feet in diameter, which has not been excavated to any depth as the floor seemed to be a solid mass of *opus signinum*. Probably this encircling

wall was the outer perimeter of the *mundus*, and excavations in its centre might reveal the opening to a subterranean domical chamber, and parallel with the wall circuit there may be a ditch such as Plutarch describes in the Comitium at Rome. Perhaps this was both the Comitium and *mundus* of the Roman Signia. I do not know that this has ever been suggested.

In this examination I am not implying that the square Etruscan *templum* was not in use outside of purely Etruscan cities: but am only seeking to prove the existence, original character, pervasiveness, and continuity of the circular *templum*. It is one of the strongest arguments against the recent craze for an exclusively Etruscan origin of Roman civilization.

PRINCETON, January 27, 1914.